

ANNEX

Local Hazard Mitigation Plan

City of Cupertino

Introduction

The City of Cupertino is a medium-sized city located in the western region of Santa Clara County, California. The City has a population of 50,546 people, based on the 2000 census¹. For Fiscal Year 2004/2005, the City's total budget was \$56,919,000. The City employs 154.75 full time and 150 part time (peak summer) people. Local police services are contracted from the Santa Clara County Sheriff's Office and fire services are paid for through a property tax distribution to the Santa Clara County Fire Department.

The Planning Process

The process of preparing this plan was familiar to the City of Cupertino. The City has a Health and Safety Element to its General Plan, last updated in 2004, that includes a discussion of hazards including fire, earthquake, landslide, flooding, dam failure and hazardous materials. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) (which, since 1988, have required mitigation for identified natural hazards). The City's efforts have focused on building on these pre-existing programs, identifying vulnerabilities and working on ways to address these vulnerabilities through mitigation.

Many of the activities conducted by the City of Cupertino were submitted for incorporation into the ABAG multi-jurisdictional plan. The City participated in various ABAG workshops and meetings, including the general "kick-off" meeting. In addition, the City has provided written and oral comments on the multi-jurisdictional plan. Finally, the City provided information on facilities that are viewed as "critical" to ABAG.

Key staff met to identify and prioritize mitigation strategies appropriate for the City. Staff involved in these meetings included Community Development, Public Works, the City's Emergency Services Coordinator, Santa Clara Valley Water District, local school districts, and the Santa Clara County Fire Department. At these meetings, priorities were identified and preliminary budgets and potential funding sources for strategies designated as "High" priority were created. The City provided the opportunity for the public to comment on the DRAFT mitigation strategies selected by City staff at the City Council meeting on May 17, 2005. The resolution adopting the plan and strategies was put on the July 19, 2005 Council Agenda after the DRAFT was approved by FEMA. The mitigation strategies will become an implementation appendix to the General Plan Health and Safety Element.

¹ For complete Census information on this city, see <http://www.bayareacensus.ca.gov/>.

Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which document this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought). These hazards also impact this community.

The City has undertaken a number of general hazard mapping activities, which are included in the 2004 revision of the Health and Safety Element. However, these maps may not be as current as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

Information on disasters declared in Santa Clara County is at <http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The City examined the hazard exposure of City urban land based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 5,887 urban acres in the City,

- ◆ Earthquake faulting – One of the longest and most active faults in the world, the San Andreas fault, crosses just outside the western portion of Cupertino. In addition, two other faults that are closely associated with the San Andreas fault, the Sargent-Berrocal and Monta Vista-Shannon fault systems, cross the west portion of the City. These faults are characterized as “blind thrust” faults where one side of the fault is elevated (thrust over) the other side during a rupture. The faults are not expected to rupture the surface; however, blind thrust faults can cause significant ground shaking as evidenced during the 1994 Northridge earthquake and 1989 Loma Prieta earthquake. (see “earthquake shaking” below).
- ◆ Earthquake shaking – 5,722 acres are in the highest two categories of shaking potential;
- ◆ Earthquake-induced landslides – the California Geological Survey (CGS) reports 183 acres of residential land and 1 acre Commercial land within the earthquake-induced landslide area;
- ◆ Earthquake liquefaction - 1,423 acres are in areas of moderate, high, or very high liquefaction susceptibility;
- ◆ Flooding – 181 acres are in the 100-year flood plain, while an additional 19 acres are in other flood-prone areas;
- ◆ Landslides – 836 acres are in areas of existing landslides;
- ◆ Wildfires – 135 acres are subject to high, very high, or extreme wildfire threat;
- ◆ Wildland Urban Interface - 2,036 acres are in wildland-urban interface threat areas;
- ◆ Dam Inundation – 566 acres are subject to dam inundation; and
- ◆ Drought – all urban acres are subject to drought.

The City also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 113 miles of roadway in the City,

- ◆ Earthquake faulting – 5 miles of roadway and 4 miles of under road pipelines are within the CGS Study Zone;

- ◆ Earthquake shaking – 175 miles of roadway are in the highest two categories of shaking potential;
- ◆ Earthquake-induced landslides – the California Geological Survey reports 5 miles of roads and 5 miles of under road pipelines within the study zone;
- ◆ Earthquake liquefaction – 38 miles of roadway are in areas of moderate, high, or very high liquefaction susceptibility;
- ◆ Flooding – 4 miles of roadway are in the 100-year flood plain, while an additional two miles are in other flood-prone areas;
- ◆ Landslides – 22 miles of roads are in areas of existing landslides;
- ◆ Wildfires – 4 miles of roadway are subject to high, very high, or extreme wildfire threat;
- ◆ Wildland Urban Interface - 60 miles of roads are in wildland-urban interface threat areas;
- ◆ Dam Inundation – 15 miles of roadway is in an area subject to dam inundation; and
- ◆ Drought – which is not a hazard for roadways.

Finally, the City examined the hazard exposure of critical health care facilities, schools, and city-owned buildings based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. Of the critical facilities in the City,

- ◆ Earthquake faulting – There are no critical facilities within the CGS Fault Study Zone;
- ◆ Earthquake shaking – 6 critical health care facilities, 18 schools, and 26 city-owned facilities are in the highest two categories of shaking potential;
- ◆ Earthquake-induced landslides – the CGS Cupertino Quadrangle shows no critical facilities within the landslide area;
- ◆ Earthquake liquefaction – No critical health care facilities, schools, or city-owned facilities in an area of moderate, high, or very high liquefaction susceptibility;
- ◆ Flooding – No critical health care facilities, schools, or city-owned facilities are in either the 100-year flood plain or in other flood-prone areas;
- ◆ Landslides – No critical health care facilities, schools, or city-owned facilities are in areas of existing landslides;
- ◆ Wildfires – No critical health care facilities, schools, or city-owned facilities in a wildfire threat area;
- ◆ Wildland Urban Interface - 3 critical health care facilities, 5 schools, and 7 city-owned facilities are in wildland-urban interface threat areas;
- ◆ Dam Inundation – No critical health care facilities, 1 school, and 6 city-owned facilities are in areas subject to dam inundation; and
- ◆ Drought – Drought will not affect city buildings directly. However, the city does not operate a water-supply distribution system.

There is one repetitive loss property in the City based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>.

The City plans to work with ABAG during 2005 to improve the risk assessment information being compiled by ABAG by providing information on unreinforced masonry buildings and soft-story apartments located in the City.

Drought, though a potential problem in the City, is not fully assessed. The City will work with ABAG and various water supply agencies on this issue.

The City plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted. The ABAG Annex states that ABAG will be doing this work in 2005 through early 2006.

The City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), flooding, wildfire, and landslides (including unstable earth) pose a significant risk for potential loss to the community.

Mitigation Activities and Priorities

As a participant in the ABAG multi-jurisdictional planning process, City of Cupertino staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed at various meetings with the Community Development, Public Works, the City's Emergency Services Coordinator, Santa Clara Valley Water District, local school districts, and the Santa Clara County Fire Department. At these meetings, all of the mitigation strategies were reviewed. The tentative decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not damaging to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof region, but a disaster-resistant one. In addition, several of the strategies are existing City programs.

The draft priorities were submitted to the City Manager for review. The draft priorities were then provided to the City Council packet for May 17, 2005. The public was given the opportunity to comment on the DRAFT priorities at that Council meeting. The final strategies (as shown in the attached Table) will become an *Implementation Appendix* to the City's *Health and Safety Element*. In addition, the City examined the hazard exposure information to City-owned critical facilities supplied by ABAG

The Plan Maintenance and Update Process

The Cupertino City Manager's Office will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting our community, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. Finally, the Annex will be a discussion item on the agenda of the meeting of City department heads and Cupertino Disaster Council at least once a year in April. At these

meetings the focus will be on evaluating the Annex in light of technological and political changes during the past year or other significant events. These groups will be responsible for determining if the plan should be updated as well as whether specific items should be incorporated into the Cupertino Emergency Plan.

The City of Cupertino is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The plan will be part of the review of the Cupertino General Plan. The public will have the ability to review the priorities, during review of the General Plan. The City's Community Development Director will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the City again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated, and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics.